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## Status report of the GERDA experiment Phase I

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Phase I of GERDA, aimed at investigating neutrino-less double beta decay of  $^{76}\text{Ge}$ , is active at LNGS since November 2011.

For the first time in a physics experiment, 8 (enriched) bare coaxial Germanium detectors are operated since months immersed in liquid Argon, acting as shield against external radiation and as cooling medium; the cryostat is surrounded by a tank containing ultra-pure water, equipped with photo multiplier tubes to veto the residual cosmic muons.

Front-end readout electronics consists of cryogenic charge sensitive preamplifiers with resistive feedback, designed to cope with the peculiar conditions of the GERDA experiment (radio-purity, long and resistive cables, etc.), followed by a digital acquisition system based on continuously running analog to digital converters.

Dedicated signal processing techniques are finally applied to extract the information of interest (energy, time, baseline level and noise, etc.)

The presentation will report on the current status of the GERDA experiment Phase I, focusing on Ge detectors performance in terms of energy resolution, stability over time, counting rate and related issues.

### for the collaboration

GERDA

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